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PLAIN and FAMILIAR
INSTRUCTIONS
FOR PERSONS AFFLICTED
WITH
RUPTURES.

In which are given

DISTINCT NOTIONS of these MALADIES
And the most proper Means of curing them.

WITH

RULES and DIRECTIONS
ON THE
USE and APPLICATION
OF
TRUSSES.

Stultorum incurata pudor malus ulcera celat. Hor.

To which is added
A DISSERTATION upon the Disorders of the URETHRA.

By GEORGE ARNAUD, *of the Corporation of Surgeons in* London.

LONDON.
Printed for the Author, and Sold by him at his House No 1. in ~~*Martlet's Court, Bow-Street, Covent-Garden*~~, and at Mr. LACY's Pamphlet-Shop, at the Corner of *St. Martin's Court*, in *St. Martin's Lane*. 1754.

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ERRATA.

Page 7. line 19. after *modeſty*, put , .
P. 10. l. 37. read *treatiſe*.
P. 21. l. 33. for *mothes's*, read *mother's*.
P. 25. l. 36. after *becauſe*, read *it is*.
P. 28. l. 1. dele *may*.
P. 36. for *Chap.* X. read *Chap.* XI.
P. 42. l. 20. after *Secondly*, read *the patient*.
P. 42. l. 29. after *re-entring*, read *if*.

THE Motives which induced the Author of the following Diſſertations to make them public, were, firſt, a ſincere Deſire of being of ſome Benefit to his Fellow-creatures in explaining the Nature and Symptoms of ſome Diſorders which, for want of being generally known, and underſtood, are often attended not only with the moſt painful, but likewiſe with the moſt fatal Conſequences: and ſecondly, the laudable Hopes of ſerving himſelf in a Profeſſion of which, as it has been the whole Buſineſs of his Life to make himſelf Maſter, ſo he flatters himſelf, that his Labours have not been intirely to no Purpoſe.

As he was born a Stranger to England he could not reaſonably hope to be truſted and employed in this Country, unleſs he was able to raiſe himſelf a character from his Works. ---- To his Works, therefore, with all due Modeſty, he preſumes to appeal, both to the preſent Diſſertations upon Ruptures, and the Diſorders of the Urethra,

thra, as well as to the Treatiſe which he publiſhed ſome Time ſince upon the former of theſe ſubjects.

The Author having ventured to tranſlate his Thoughts into Engliſh himſelf, rather than to truſt the Buſineſs to any other Perſon, who might not always ſo clearly underſtand the Force of his Expreſſions, he humbly begs the candid, indulgent, and judicious Reader to attend to his Meaning, rather than to expect Exactneſs of Stile.

DISSERTATION

ON

RUPTURES.

INSTRUCTIONS *to Perſons afflicted with Ruptures.*

THOUGH ruptures are far more frequent than is commonly believed, yet there is no ſpecies of diſorders with which the public is hitherto leſs acquainted. Moſt perſons are prompted by a principle of curioſity to form ſome general ideas even of the leaſt common diſeaſes, without giving themſelves the ſmalleſt trouble to ſtudy them. They reaſon and talk concerning them in daily converſations, form a judgment of the capacities of various phyſicians, extol the ſkill of one, and as much depreciate that of anothers; nay, what is ſtill more, they

think they have a right to criticiſe on the moſt abſtruſe medicinal productions.

These things are far from being inconſiſtent with the general welfare of the human ſpecies, when they do not tend to obſtruct and fruſtrate phyſicians and ſurgeons in the rational and methodical treatments of diſeaſes. If phyſic and ſurgery were made an eaſy and amuſing ſtudy, it would be in the power of every one to reaſon with exactneſs, to judge with diſcernment of the capacity of phyſicians and ſurgeons, and to read their works with ſufficient knowledge. Every man has, no doubt, an uncontroverted right to be his own phyſician. But no one can have any privilege to practiſe in that capacity on others, without having acquired a competent knowledge of diſeaſes. Why, then, do not people take more pains? Men, from ſome cauſe or other, often give themſelves a great deal of labour to acquire particular branches of knowledge, intirely foreign to their ſtate and condition in life; but every one pretends to be a phyſician, without taking the ſmalleſt care to obtain a due acquaintance with diſeaſes. Nothing, however, ought to be thought of more importance than the ſtudy of medicine, ſince all men are, more or leſs, ſubject to diſeaſes. Beſides, no branch of knowledge affords a more noble and exalted pleaſure to the human mind, than the ſtudy of the animal œconomy, without which no acquaintance with diſeaſes can poſſibly be obtained. This, among all other parts of literature, is at once the moſt curious and the moſt neceſſary. Man, who is the principal object of its reſearches and diſcoveries, is bleſſed with a degree of excellency ſuperior to that of the other works of nature, how perfect ſoever in their reſpective kinds. Why, therefore, do not people make it their buſineſs to know the ſtructure, order, and the uſes of the ſeveral parts of which the human machine is compoſed? Some perhaps will remonſtrate that the ſtudy of anatomy is diſguſting; but, on

ſup-

ſuppoſition that this was true, yet the obligation we lie under from ſelf-intereſt to know our own frame and make, ought to ſurmount and counter-balance all thoſe offences againſt our natural delicacy with which the ſtudy of this ſcience may ſeem to be accompanied. Beſides, every perſon is not obliged to operate with his own hands. The draughts of the ſeveral parts from the greateſt maſters, and every where to be found in their works, ſet thoſe ideas in a clear light, which a ſimple reading might have left obſcure and perplexed. Furthermore, wax-anatomies, carefully and accurately prepared, would be almoſt ſufficient to form maſters in anatomy, but they were neglected becauſe we had them in our poſſeſſion. When theſe waxen figures were at Paris, ſome perſons of taſte and genius thought it worth their while to take a journey thither, in order to ſatisfy their curioſity; and, ſince they have been at London, Frenchmen have come on purpoſe to ſee them here; for the future thoſe that deſire to ſee them will be obliged to travel to Ireland. It is an unaccountable failing in the human mind to deſire chiefly ſuch things as it has not, for the preſent, within its reach. But if it ſhould be objected, that, it would only imbitter the pleaſures of life, if we were acquainted with the delicacy and fineneſs of the parts on which our being and health depend, and that we ſhould be continually forming the hateful idea of a quick approaching death; I anſwer, that this would by no means happen, ſince we ſhould rather learn, on the contrary, to ſpare and preſerve theſe parts, and avoid the means which, without being ſenſible of our folly, we continually employ to deſtroy them. How many great and ingenious men have, notwithſtanding the weakneſs of their conſtitutions, arrived at extreme old age, who, without this ſo neceſſary knowledge of anatomy, would have died in the very flower of their youth? By means of this knowledge

of the animal œconomy every man would be in a condition to ſtudy his own conſtitution, to obſerve the changes which happen to it, to guard againſt every thing that might prejudice it, to diſcover the cauſes of diſeaſes, to know their principal differences, ſymptoms, and ſigns, and, in a word, when he ſhould be ſeized with any diſorder, he would be able to give a juſt account of it to his phyſician, who, for that reaſon, would be better able to know what to do immediately; whereas he is often obliged to ſpend the firſt days of the diſeaſe in inveſtigating its nature and ſpecies, ſtudying the conſtitution of the patient, and forming the moſt proper plan for his proceeding in the courſe of the cure.

MEDICINE and ſurgery would be ſo far from ſuſtaining any loſs by theſe means, that they would reap conſiderable advantages from them. The public becoming more knowing, would perhaps be in a condition to make ſome happy diſcoveries*. They would form judgments of the dangerous and intricate complications of diſeaſes: they would be witneſs of the contraſte or contrariety between the indications and contra-indications in diſeaſes: they would not ſo raſhly impute to the moſt ſkilful and judicious practitioners in the art of curing ſuppoſed faults and errors, of which they are by no means guilty: they would be forced to do theſe men juſtice by admiring thoſe maſterly ſtrokes of practice, which are often

* Perſons, whoſe genius has a turn to the ſtudy of phyſic, have diſcovered remedies uſeful to the human body, that the phyſicians have adopted in their practice. Without Lord LAGARAYE, a French Count, we ſhould not have known the *fixed-hydrolic ſalts* of herbs, for the diſcovery of which the king was pleaſed to grant him an honourable gift.

The uſe of *ſoap* was not ſo generally known in phyſic, till Mrs. STEPHENS found it by her happy experience for the ſtone in the bladder, and the gravel in the kidnies, which was ſo eſteemed that the parliament gave her the ſum of five thouſand pounds for her remedy.

highly

highly laudable: and they would be able to judge of the true cauſes of death, which are ſometimes inſurmountable.

It is otherwiſe with reſpect to ruptures than with moſt other diſeaſes: for though the people have ſome ſuperficial idea of the common diſorders of the body, yet the name of rupture is hardly known among the vulgar, and much leſs among perſons of note and diſtinction, who ought to have a more extenſive knowledge and comprehenſion of things.

The general cauſe of the ſmall acquaintance people have with diſorders of this kind, is owing to a circumſtance peculiar to theſe diſorders; namely, their having this circumſtance peculiar to themſelves; that by attacking either the parts of generation, or thoſe adjacent to them, they give a harſh and diſagreeable ſhock to that vanity and ſelf-love which prevails but too much in the human breaſt. For this reaſon the fair ſex weakly imagine, that theſe diſorders carry with them a ſort of obſcenity, which too groſly offends the modeſty of their ſex; and therefore they do not care to talk of them. This is alſo the particular reaſon which hinders ſome from being inſtructed with reſpect to the true character of theſe diſorders; and which, by making others decline the aſſiſtance neceſſary for their relief, forces them to conceal their infirmities within their own breaſt. With reſpect to men, a great number of theſe imagine that ſuch of their own ſex as labour under this diſorder, are incapable of performing the moſt common duties of life; ſo that moſt men avoid ſpeaking of them: whereas thoſe who are really afflicted with them, not daring to conſult able ſurgeons, who deſerve to have an entire confidence repoſed in them, remain ignorant of the diſorder, and inactive with reſpect to its cauſe. The more vulgar and indigent people being incapable of reaſoning on theſe diſeaſes, and not in a condition of procuring the neceſſary means of relief,

ſtruggle through the remains of a languiſhing and miſerable life, under the weight of their calamities. Families, cities, and even kingdoms, are ſometimes almoſt univerſally afflicted with ruptures, without ever ſo much as thinking on the means of curing them. The patients are deplorable victims of that neglect and contempt, into which the maſters of the art have ſuffered theſe diſorders to fall. Surgeons leave the treatment of patients afflicted with ruptures to common workmen, whoſe meaſures prove mortal to an incredible number of their fellow-creatures, as I have ſhewn in the preface of my larger work on theſe diſorders *. Theſe men, incapable of making the ſmalleſt diſcoveries in the nature, or improvements in the cure, of theſe diſorders, have greatly injured and depreciated, in the eſteem of others, thoſe from whoſe ſkill real relief might be expected: ſo that this part of ſurgery is fallen into ſo great a diſcredit that every man who profeſſes himſelf a ſurgeon for ruptures is looked upon as a quack: but this prejudice would be diſſipated, if all thoſe who aſſume this character were able and ſkilful ſurgeons.

On account of the great truſt with which the public has honoured me, I think it my duty, in point of gratitude, to ſupply them, by way of inſtructions, with a general knowledge of theſe diſeaſes, and of the

* Thoſe who deſire a fuller account may be ſatisfied by providing themſelves with the complete edition, in a large volume 8vo of this work, intitled, *a Diſſertation on Hernias, or Ruptures*, ſold by A. Millar, bookſeller, oppoſite to *Catherine Street* in the *Strand*, *London*, in which all the tricks of the quacks are revealed: the anatomical diſpoſitions of the parts concerned in ruptures are explained: the remedies proper for all caſes are deſcribed: and a great number of obſervations on various and extraordinary cures are related. The author has alſo publiſhed *a Diſſertation upon Hermaphrodites*, (with copper plates) relative to the ſame ſubject.

means

means of preventing their ſymptoms. It often happens, that a patient is in the greateſt agony, when ſurgeons come to his relief, and that he dies by a neglect to employ the firſt remedies ſeaſonably. I have ſeen numbers die, ſome through an ignorance of their condition, others from a delicacy inſpired by modeſty †; others confeſſing their misfortune; others for having been in country places, far diſtant from the towns where the neceſſary means of relief were to be had, and the greateſt number for want of having due care taken of them. As every one will have it in his power from this work to know theſe diſorders, together with their ſymptoms, and the methods of removing them, ſo no perſon for the future ought to alledge his ignorance as an excuſe for his negligence. When it is known that theſe diſorders are common to every body, that a ſagacious and ſkilful ſurgeon can remove them, without offending againſt the ſtricteſt laws of modeſty. and that it is his intereſt to keep the ſecret, people will become leſs ſcrupulous in ſeeking for the means of relief, and with an entire confidence commit themſelves to his care. Thoſe who are too far diſtant to have the neceſſary aſſiſtance ſoon enough, will know what remedies are to be uſed, while they wait for the arrival of a ſkilful ſurgeon, whom patients ſometimes cannot find but at a great diſtance. This interval of time, which is always precious, will be employed in uſing the proper remedies, which I ſhall carefully ſpecify, when it is known that the whole ſucceſs of the beſt methods, which the moſt ſkilful ſurgeon can put in practice, depends on the good uſe which has been made of the remedies indicated in the beginning of the diſorder. I have a freſh inſtance of this. A gentlewoman from *Bath* who lodged in the houſe of Mr. *Davy*, in *Beaufort Build-*

† This reaſon induced me to inſtruct in that branch a gentlewoman to attend the ladies, on account of the reluctance with which they intruſt themſelves to men.

ings in the *Strand*, was afflicted with a ſtrangulation of the bowels at ſix o'clock in the evening, *Auguſt* 18: She paſſed the night without knowing the cauſe of her diſorder, which made her ſuffer the greateſt agony that it is poſſible to expreſs; but ſhe was ſaved by the due care of Mr. *Levit*, a ſkilful ſurgeon, who knew the caſe, and applied the proper remedies to it, till he had time to ſend and adviſe with me: at my arrival at 8 o'clock in the morning the day after, I found her near expiring; but as the preparatory remedies had been uſed by Mr. *Levit*, I was ſo happy to deliver her *extempore* from the Jaws of death.

Patients may even in ſome caſes be cured by the ſole uſe of theſe remedies, without having any occaſion for manual operations, I have frequently found patients cured, when I arrived at their habitations, in different provinces, whither I was called to their relief. The prince of *Talmon*, at that time upon his own eſtate, about 300 miles from *Paris*, ſent to me in the year 1739. I being in the country, Mr. *Le Dran*, an eminent ſurgeon went in my ſtead, and had the ſatisfacttion to find the prince cured, without any other means than the uſe of the method I had preſcribed to him, in caſe he ſhould be ſurprized by any diſcouraging ſymptom. A great many charitable perſons, who, in country places, employ themſelves in relieving poor patients, have preſerved from death numbers of thoſe who would otherwiſe have died, had not the means which I preſcribed them been applied in ſuch occaſions, when theſe diſorders called for a ſpeedy aſſiſtance. Theſe benevolent perſons deſired that I would give them a courſe of connected and rational rules, for the treatment of their patients. They perceived how dangerous it was to ſubject themſelves to ſimple formulas, which are always no leſs trifling than fallacious when applied without judgment; they having often remarked,

that

that ſuch remedies as in particular caſes had been efficacious, in others proved very prejudicial, and even mortal.

The inſtructions with which I now preſent the public, are the ſame which I formerly began to compoſe for the benefit of the poor, and having in the preface of my larger work given the reaſons for my devoting myſelf to their ſervice, I ſhall here add the following reflections in their behalf, ſince theſe corroborate and ſtrengthen the deſire I always had to fulfill my engagement upon this head.

The poor are in a ſtate almoſt the ſame as ſhades in a picture: they form a neceſſary contraſte, under which humanity ſometimes groans, but which does honour to the views of Providence. No doubt, the vanity, the ambition, and the caprice of men firſt eſtabliſhed the grievous diſtinction between them and the rich, but in the preſent ſtate and condition of things, it is proper and expedient to ſupport and preſerve this diſtinction. 'Tis therefore requiſite there ſhould be poor people, but it is by no means neceſſary that any ſhould be miſerable. The latter are a deplorable reproach to humanity; whereas the former enter as ſo many uſeful members into the political œconomy of the beſt governed ſtates, in which, by the labour and induſtry of the poor, abundance reigns, all the conveniencies of life are found, and the mechanic and more ſervile arts are improved and made to flouriſh. Do not ſo many conſiderable advantages ariſing from the poor loudly call upon us to ſupply them, at leaſt, with what is neceſſary to enable them patiently to ſupport the pinching hardſhips of their condition. The public intereſt, and even humanity itſelf, dictate leſſons on this ſubject, ſo moving, that a perſon of the ſmalleſt degree of tenderneſs of heart, can never withſtand their force and energy. Founded upon this principle, their neceſſities were always the rules of my conduct with regard to them: at any

hour

hour whatever they are always welcome to me; the public is my witneſs that I have never refuſed to go to relieve them in their illneſſes.

This work being adapted to the capacity of charitable perſons, and conſequently advantagious to the poor will, for that reaſon, be ſo much the more beneficial to every body; and for this purpoſe I have made it my principal buſineſs to render it clear and diſtinct, by avoiding the hard and uncouth terms of the art, and making uſe of common expreſſions, and ſuch as every body can eaſily underſtand. I have given the true character of ruptures, their different ſpecies, their diſtinguiſhing ſigns, the various ſymptoms which appear in them, and the true rules which the patients ſhould obſerve, with precepts for the application and uſe of truſſes, with which I hope thoſe who ſtand in need of them will have reaſon to be pleaſed. In a word, I have done all I could to render this work uſeful, and executed my deſign in ſuch a manner, as that the moſt ignorant may reap from it all the advantages and aſſiſtances requiſite for the cure and removal of their infirmities.

But as it is not poſſible to obtain a ſufficient knowledge of theſe diſeaſes, without having previouſly a general idea of the parts affected, I thought it proper to give in my larger work, a plain account and deſcription of the parts of the belly, and thoſe of generation which have the greateſt connexion with theſe diſorders.

As it is almoſt impoſſible to devote one's talents to the uſe of the public, without occaſioning jealouſy in ſome perſons, I ſhall take this opportunity of anſwering thoſe, who without regarding their own characters, have ventured their credit by vilifying, and abſolutely denying, the poſſibility of the extraordinary cures related in my former tseatiſe upon this ſubject, tho' they are proved by the moſt reſpectable witneſſes.

The IIId obſervation, p. 292, of my diſſertation upon the ruptures, was one of thoſe which was moſt generally conteſted by the gentlemen of the profeſſion in *London:* but the affinity this obſervation has with the following caſe of a gentleman whoſe high ſtation in life does not permit me to name him, will, perhaps, make good that particular and conteſted caſe: among ſeveral witneſſes which may teſtify this cure, Mr. *Watſon*, an eminent apothecary and fellow of the Royal Society in *London*, as well known by his probity, as by his learning, ſeems to me to be ſufficient to teſtify the truth of this.

In the year 1749, the patient, then about 60 years of age, had a rupture from his infancy, which having always continued increaſing, was almoſt as big as his head. That rupture which, for 16 years together, did not return into the belly, was looked upon as incurable (in conſideration of its contracted adherences) by Mr. *Cheſelden*, whoſe deciſions were moſt often prevailing and right. The patient having then no hopes of any relief from his diſorder, bore with all the reſolution and firmneſs of a man of ſenſe, the moſt grievous ſymptoms of this diſeaſe. He was tortured by continual gripings of the guts, bad digeſtions, frequent ſwimmings in the head, and by a very troubleſome, frequent, and involuntary provocation of making water. The penis entirely concealed in the exceſſive bigneſs of the ſwelling, cauſed new troubles every time the patient wanted to make water. Believing that the ſtrangury was occaſioned by ſome diſorder in the paſſage of the urine, he had recourſe to Doctor *Plunckett*, who had then the firſt rank among thoſe who treated the diſeaſes of the urethra. Dr. *Plunckett* probed the urethra, but found no obſtruction in it; he felt but one oppoſition made by the parts contained in the ſcrotum. The Doctor, who had been witneſs of ſome particular cures that I had done in that ſort of diſorder, adviſed the patient to

that

put himſelf under mycare. The 15th of *July* 1749, I was called in conſultation on that caſe with Dr. *Plunckett*, and Mr. *Watſon*. I found by an exact ſearch of the diſeaſe, that it was a rupture compoſed of ſome part of the caul, of the guts, and of the bladder. I explained, by the miſplaced parts, all the ſymptoms with which the patient was vexed. So great a quantity of bowels lying in an unnatural place, it was impoſſible that it ſhould not but be extremely painful to him, and from hence proceeded the cauſe of the gripings: the lengthening of the caul had forced the ſtomach to come down, and by this miſplaced part the digeſtions were imperfect, and troubleſome to the patient; the greateſt part of the bladder lying in the ſcrotum, the leſſer part of it which remained in the belly*, contained but a ſmall quantity of urine, and obliged the patient to make a little at a time, but very often; the conſtraint of all theſe parts ſlackened the motion of the blood in the belly, which cauſed it to return in a greater quantity in the brain, and gave occaſion to the ſwimmings in the head to which the patient was ſubject; the total diſappearing of the penis was explained by the exceſſive bigneſs of the ſwelling that hid this ſubſtance, and deſtroyed its figure. I propoſed to the patient to cure him of all his diſorders and of the rupture together; but this propoſition ſeemed to him and his friends to be a paradox: but after having demonſtrated the poſſibility of it to them, by alledging the inſtance of the IIId obſervation, p. 292, of my diſſertation upon ruptures, they were convinced, and the patient directly reſolved to follow all that I preſcribed. The 13th day of the treatment I put up the rupture, and nothing preternatural remained in the ſcrotum, to the great ſur-

* Speaking to the gentlemen of the profeſſion, I ſhould ſay, *baſon*.

prize

prize of the patient, and of his friends. I kept the parts in their proper place by the means of a convenient truſs, and all the ſymptoms vaniſhed away immediately after: the bladder received ſtrength by little and little to contain the urine, and after ſome weeks the patient was able to keep it five or ſix hours, and he never enjoyed ſo good a ſtate of health as ſince that time. Notwithſtanding he has always made uſe of the truſs ſince that operation, I may affirm it is more by prudence than neceſſity, for indeed I have been tired with ſoliciting him to quit it.

THIS is the only anſwer that I give to thoſe perſons who would willingly have ruined my credit; but, inſtead of that, have given me much more reputation, by putting it in my power to vindicate myſelf, both to the public, and to them.

I STILL inſiſt that I have not made uſe, in that ſecond caſe, of any other means than thoſe laid down in the IIId obſervation, p. 292, and Mr. *Watſon* can affirm, that he both exhibited and adminiſtred the ſame medicines to the patient: and the public may be convinced that my principal view is to be as ſerviceable as I can to my fellow-creatures.

DURING the time of printing this eſſay, Mr. *Watſon* above-mentioned is witneſs of a like operation (attended with nearly the ſame circumſtances) of a perſon too eminent to be named publicly.

PLAIN and FAMILIAR

INSTRUCTIONS ON RUPTURES.

CHAP. I.

Of Ruptures in general.

THE DESIGN OF THE WORK. THE intention which I have of giving inſtructions to perſons afflicted with ruptures, neceſſarily obliges me to enter into a ſhort detail of the character of theſe diſorders, their differences, their cauſes, their ſigns, and their ſymptoms, in order to arrive at the knowledge of the means proper to guard againſt, or cure them.

WHAT A RUPTURE IS. RUPTURES are tumours or ſwellings formed by the iſſuing forth of certain parts contained in the belly.

The parts contained in the belly are the caul, the guts, the ſtomach, the liver, the ſpleen, &c. the parts which ſerve to contain thoſe, are the ſkin, the fat, and the muſcles; theſe laſt have five natural apertures, which permit the exit of the guts and caul. All theſe parts are exactly explained in the anatomical expoſition, Sect. I. of my book, cited in the preliminary diſcourſe.

DIVISION OF RUPTURES. Ruptures are divided into true and falſe.

TRUE. True Ruptures are ſuch as are formed by the coming forth of thoſe parts contained in the lower belly.

FALSE. Falſe Ruptures are tumours or ſwellings formed by the collection of the blood, the lympha, or other humours, in the parts where true Ruptures happen.

DISTINCTION OF RUPTURES Ruptures are diſtinguiſhed according to the parts of which they conſiſt, and the places which they poſſeſs.

DIFFERENCES ACCORDING TO THE PARTS. They differ among themſelves on the ſcore of the parts of which they conſiſt; ſome being formed by the guts; others by the caul; and others, again, by the guts and the caul together.

There are alſo ſome Ruptures formed by the ſtomach, and the bladder (which happens rarely); others by the ovaries, and the womb paſſing thro' the openings, in the bending of the groin; (but theſe ſorts of Ruptures happen ſtill more rarely:) and ſo, without inſiſting on a particular detail of them, which would throw confuſion into the diſcourſe, I ſhall only mention thoſe produced by the gut and the caul. It ſhould be too neceſſary to ſpeak of the relaxation of the

the womb, of its inverſion; of the inverſion and prolapſus of the fundament, but it is not poſſible to treat of thoſe in ſo ſhort a ſpecimen; theſe are explained at large in Sect. II. Part 1. of my book.

DIFFERENCES OF RUPTURES, ACCORDING TO THE PLACES. The true Ruptures differ among themſelves, from the places they poſſeſs; in that ſome happen in the navel; and theſe are therefore called Ruptures of the navel: others in the groin, and theſe are called inguinal: others, in the bending of the thighs, and called crural: Others, again, are formed in different parts of the ſurface of the belly, and called Ruptures of the belly.

There are, beſides, other Ruptures which happen in other places, and which, for that reaſon, differ from theſe others; as ſome happen in the loins, others in the vagina; others, again, which are formed at the holes at the bottom of the hanch-bones; but I ſhall wave ſpeaking of all theſe different ſorts of Ruptures, as they happen but very rarely, to engage our attention here; theſe extraordinary caſes claiming only the attention of the people of the profeſſion.

It ſhould be here the place of ſpeaking of the falſe ruptures, but, to avoid confuſion, I refer to my book, chap. xxix, perſons concerned in theſe caſes.

CHAP. II.

Of the general Cauſes of Ruptures.

WHAT A CAUSE IS. PHYSICIANS call cauſes of diſeaſes every affection againſt nature, which produces, or which concurs to produce, diſeaſes. The cauſes of Ruptures are divided into remoter or primitive, and into proximate or determining.

REMOTE CAUSES. The remote causes are those which arise from the temperament or constitution, which the patients bring with them into the world, or from the disposition they acquire by their manner of living. It is not to be doubted, but that children ordinarily enough inherit the good or bad qualities of the soul and body of their parents; so that there is nothing more certain, than that robust parents produce strong and vigorous children; and the delicate, children of the like delicacy of constitution with themselves; the gouty, gouty; and the phthisical, phthisical, *&c.* And those who have Ruptures commonly produce children with the like indispositions with themselves; consequently the most remote causes of Ruptures may be traced up to the disposition which is communicated to the child at the moment of its conception.

PRIMITIVE CAUSES, WHENCE THEY MOST COMMONLY PROCEED. It is much more common to find the primitive or remote causes of these diseases in the manner of living. All the parts which are contained in the belly, and all those which form it, are naturally softened and relaxed by the too moist air which is respired; by the marshy places which are inhabited; by the too relaxing aliments that are used, as the too thin milk of a nurse of a bad constitution; by the oil, the butter, the too great quantity of water, small-beer, and other the like drinks.

DETERMINING CAUSES. Every thing that is capable of determining the parts, already relaxed, to come forth, is considered as immediate causes of these disorders. Loud crying, leaping, straining, constipation, pregnancy, and child-bearing, force the parts contained in the belly to stretch, and come out at those places where they happen to find the least degree of resistance. It will be found a fuller account of the causes of Ruptures in the large edition, Chap. 4.

CHAP. III.

Of the ſigns of true Ruptures.

What a ſign is. THE ſigns in diſeaſes are ſenſible marks, which diſcover, and diſtinguiſh them from each other. Some of them diſcover the preſent ſtate, the character, and the ſpecies of the diſeaſe; and they are called diagnoſtic. Others again enable us to judge of the iſſue of a diſeaſe; and theſe are called prognoſtic.

Diagnostic signs of Ruptures. The diagnoſtic ſigns, common to all true herniàs or Ruptures, differ according to the progreſs of the diſeaſe. When the Rupture is juſt about forming, the patient feels a ſmall pain, like that of an excoriation, or ruffling of the ſkin, and that within the belly; when the Rupture increaſes, the patient perceives, on applying the hand, a ſmall ſwelling, which diſappears upon preſſing with the finger: when entirely formed, cholical pains are from time to time felt in the part of the Rupture, and which extend to the parts about the navel. The diagnoſtic ſigns, common to all the ſpecies of true hernias, do, beſides, diſcover what parts they conſiſt of, whether of the gut, or caul, or of both together. Thoſe conſiſting of the gut are known by a ſmall rumbling noiſe cauſed by the wind and the fluid matters contained in the gut, which rumbling is heard, eſpecially, upon handling the Rupture, in order to procure its return. Thoſe formed of the caul diſcover themſelves, upon the touch, by a doughy reſiſtance, like what we feel, when we come to handle a piece of tripe. In thoſe formed of the gut and caul together, theſe ſigns are mixt, that is to ſay, they are found combined.

Prog-

PROGNOSTIC SIGNS OF RUPTURES. In regard to prognoſtic ſigns, it may be ſaid, in general, that Ruptures are very troubleſome diſorders, when they are neglected, and come to be attended with ſymptoms: Thoſe formed of the gut are more dangerous than thoſe formed of the caul; thoſe happening in the navel, and in the ſurface of the belly, more difficult to cure than thoſe called inguinal; and thoſe happening in the bending of the thigh, are, of all, the moſt difficult of cure.

In fine, all of them are ſo much the more difficult to cure, as they are of an older ſtanding; conſequently leſs ſo in children.

CHAP. IV.

Of the ſymptoms of Ruptures.

WHAT A SYMPTOM IS. SYMPTOM is an accident, or an effect of the diſeaſe, and which diſappears when the cauſe ceaſes.

STRANGULATION. Of all the ſymptoms of Ruptures, that of the ſtrangulation is the moſt formidable and dangerous, and againſt which patients ſhould be moſt on their guard, either in preventing it, or ſeeking out the means of cure, and uſing them inſtantly upon this ſymptom; never ſo little neglected, it is impoſſible for the experteſt ſurgeon to remedy it. The death of the late Queen is too ſenſible an inſtance of this truth, not to be capable of ſtriking every patient; for who could procure better means of aſſiſtance than ſhe upon this melancholy occaſion?

WHAT STRANGULATION IS. By ſtrangulation we underſtand a degree of ſtraitening, which happens thro' the ſtrong compreſſion of the parts thro' which

the gut paſſes, and which no longer ſuffer it to return into the belly. In this caſe, then, the gut is ſtrangled, and this ſtrangulation cannot happen without two other ſymptoms extremely eaſy to be underſtood; the firſt is an inflammation; the ſecond, an impediment to the paſſage of the feces into the gut; from whence it neceſſarily follows, that the feces muſt return by the mouth, by throwing them up, if the return of the gut into the belly be not procured, for the feces to take their ordinary courſe by the fundament.

Tho' ſometimes it happens, that it is not above five or ſix hours before the feces return by the mouth; yet this is not ſo commonly the caſe: The vomiting comes on for the moſt part on the 3d or 4th day; ſometimes not till after 8, 9 and 10 days; but the patients are afflicted with ſuch ſymptoms, as by preceeding the vomiting, anounce and characterize the ſtrangulation of the gut ſo diſtinctly, that every one who will but attend, can never miſtake the caſe.

Here follows the detail of the ſymptoms.

First, The Rupture grows bigger than ordinary.

Secondly, Cauſes much pain.

Thirdly, Baffles all attempts to reduce it.

Fourthly, The pain extends as far as round the navel, if the Rupture be in the bending of the thigh; if in the navel, the pain, beginning there, extends to the groin.

Fifthly, The pains called gripes hold only for ſome minutes; but recur from time to time, and the diſorder they cauſe, is hourly increaſing.

Sixthly, Upon theſe gripings comes wind, which is plentifully diſcharged at the mouth; the patient cannot diſcharge it by the fundament, notwithſtanding all the inclination he ſeems to have to do it by that part.

Seventhly, The patient is troubled with loathings, or an inclination to vomit, which terminate in a plentiful ſalivation, thick and glutinous.

Eighth-

EIGHTHLY, At laſt the patient throws up the aliments, then come the feces, whoſe taſte and ſmell are extremely nauſeous.

During the ſeries and increaſe of the ſymptoms, the Rupture ſwells, the belly turns hard, and very big, a fever comes on, and heightens more and more.

But, on the cloſe of the diſtemper, the vomitings ſlacken, the patient is afflicted with hiccups, the belly ſubſides, and becomes inſenſible, the Rupture turns ſoft and livid; the ſight fails; the pulſe turns intermitting and languiſhing, at length is totally loſt, and the patient dies for want of having foreſeen the means of guarding againſt a death he might have avoided.

ADHESIONS, Ruptures are, beſides, ſubject to another ſymptom, called adheſion; 'tis an union, which is made between the parts coming out of the belly and thoſe without it, as the fat and the ſkin, *&c.* The parts which are attached externally, can no longer return into the belly, without a particular ſkill of a ſurgeon.

But how ſhould we avoid a danger unknown, how guard againſt theſe ſymptoms, if we are uninſtructed about them? Poſſibly 'tis only by reading; and to render it the more uſeful, I propoſe to deſcribe each ſpecies of Rupture in particular; after which I ſhall communicate the means to guard againſt, and remedy them.

CHAP. V.

Of the Ruptures of the Navel.

EXPLANATION OF THE PART. THE navel, is a hole deſtined to give paſſage into the belly of the infant, during its ſtay in the mothes's womb,

to what we call the navel ſtring. It conſiſts of three ſorts of veſſels; namely, a vein, two arteries, and a canal called urachus: This ſtring is a continuation of the veſſels which form the after-birth which after-birth is attached to the bottom of the womb. By means of the vein, which is a part of this ſtring, the blood is conveyed from the mother to the child, for its nouriſhment and growth: and the blood returned back to the mother by the intervention of the two arteries.

The urachus is a canal coming from the bladder of the child, for relieving it of the urine, by conveying it into the blood of the mother. When the child comes to the world, this ſtring is tied up with a thread, and cut, to prevent the flux of the blood of the child; ſo that the hole of the navel is filled by the navel-ſtring, yet imperfectly enough, as it afterwards comes to ſhrivel and dry.

Character of the disease. When we happen at any time to ſtrain much, the gut or the caul eaſily comes out at the hole of the navel, becauſe there a leſs degree of reſiſtance is found than any where elſe.

Differences and causes. The Ruptures of the navel are not only formed at the hole itſelf of the navel, but ſome more commonly happen at the circumference of this hole, becauſe theſe parts are very weak, and eaſily dilated by any violent efforts, or gentler efforts often reiterated Women are very ſubject to this ſpecies of Rupture The reaſon is, that, in pregnancy, the belly is extremely extended, the hole of the navel enlarged more than in the natural ſtate, or that its circumference yields and gives way more eaſily than all the other parts; becauſe, as was ſaid, the circumference of the navel is weaker than the navel itſelf.

Diagnostic signs. The ſwelling and elevation of this part is the characteriſtical mark of the Rupture,

ture, eſpecially if this ſwelling diſappears when abed, or when preſſed with the fingers.

PROGNOSTIC SIGNS. In general this ſpecies of Ruptures is very difficult to cure: The ſmall ones, and recent, are more dangerous than thoſe of a longer ſtanding; but theſe of a longer ſtanding are of more difficult cure. Theſe diſeaſes are very dangerous in children; but more eaſily cured than in perſons of an advanced age.

SYMPTOMS. The Symptoms of the Ruptures of the navel are the ſame, in general, with thoſe in all the other ſpecies of hernias. One, peculiar to and common in them, is a ſpecies of ſlight colic, leſs painful than troubleſome, which the patients are inceſſantly afflicted with when up, and which encreaſes after eating.

CURE. The Art of ſurgery ſupplies three different means of cure for this ſpecies of Rupture. The firſt is what is called the palliative: The ſecond, the radical; and the third, is the means of remedying the ſymptoms.

THE PALLIATIVE CURE is that by means of which we only attempt to prevent the ſymptoms, by keeping the parts in the belly by bandages or truſſes, which exactly cloſe up the hole, at which the parts come out, and hinder their coming out when once returned into the belly. This method of cure ſuits the hernias, accompanied with inconveniencies, which oppoſe their radical cure, as thoſe of too old a ſtandding, thoſe of too conſiderable a bulk, and thoſe happening to women who are ſubject to have children.

THE RADICAL CURE is that by which Ruptures are cured by the remedies proper in theſe diſeaſes; of which I ſhall ſpeak in chap, xiv; as in chap. ix. of the means of removing the ſymptoms.

CHAP. VI.

Of the Rupture of the groin.

EXPLANATION OF THE PART. THE Author of nature has ſo diſpoſed the belly, that there are two holes, which anſwer to the parts, called the groin. Theſe holes are deſtined to give paſſage from the belly on each ſide in men to the Teſticles's veſſels, in women to a ſpecies of round ſtring, called from its figure, the round ligament of the womb; it ſerves to keep that part in its place. The holes, thro' which theſe ligaments paſs, are, from their figure, which is nearly round, called rings. In the natural ſtate, theſe holes are filled by the parts which paſs thro' them; but upon violent ſtrainings, they enlarge gradually, and at laſt give paſſage to the gut or caul, or to both together, out of the belly, and ſuffer them to form the Ruptures of the groin; they are called inguinal Ruptures.

DIFFERENCES. The Ruptures of the groin are different, and have different appellations according to the place they occupy. Some remain in the bending of the groin; theſe we call incompleat; Others deſcend to the ſack in men, or to the great lip of the natural parts in women; and theſe are called compleat.

CAUSES. The particular cauſe of inguinal Ruptures proceeds from the rings being ſituated in the loweſt part of the belly, which are continually relaxed by a certain quantity of water found at the bottom of the belly: If then the determining cauſes come to act, theſe parts being naturally open, and ſituated in the loweſt part of the belly, the guts or the caul inſinuate eaſily into them.

The

The determining cauſes are, loud crying, leaping, the ſtrainings made to cough, at ſtool, in child-bed, *&c.*

The neglect of remedying the incompleat Rupture of the groin is the moſt immediate cauſe of the compleat Rupture; for if its progreſs be not ſtopp'd by bandages, it is natural to think that it muſt daily encreaſe more and more, and arrive at that pitch, that all the guts ſhall come down to the great lip. Nothing is more common than ſuch ſorts of Ruptures. They are ſometimes obſerved of the bigneſs of one's head, and hanging down to the middle of the thighs.

Symptoms. The parts which ought to continue in the belly, which is their natural place, cannot be thus diſarrang'd without this conſequence, a conſiderable diſorder in the ſtate of the health; for the guts cannot come down ſo low, and the ſtomach at the ſame time not be pulled down and diſplaced. As the guts are a continuation of the ſtomach, it then but imperfectly performs the digeſtion of the aliments; the patients are afflicted with windy cholics; the twitchings, to which the guts, the ſtomach, and other parts contained in the belly, are ſubject, cauſe almoſt continual weakneſſes, which are improperly aſcribed to the cravings of hunger.

It rarely happens, that theſe large Ruptures are ſubject to ſtrangulation; but ſhould that happen, it is ever with the moſt imminent danger.

The incompleat Ruptures are rarely ſubject to the ſymptoms above deſcribed, yet more than the others ſubject to ſtrangulation; becauſe the rings, not having loſt their ſpring, as in the compleat Ruptures, are more in caſe to make an impreſſion upon the parts, and hinder their return, which conſtitutes the ſtrangulation. It is, beſides, true, that it is eaſier to guard againſt their ſtrangulation, becauſe eaſier to keep them in with bandages or truſſes.

DIAGNOSTIC SIGNS. The incompleat Rupture of the groin is diſtinguiſhed by its facility of coming out and returning again, when not adherent, and by the ſigns of the compleat Rupture.

The compleat Rupture is alſo diſtinguiſhed by its facility of returning again, when not adherent: If adherent, that is, if attach'd to the exterior parts, and formed of the gut, we feel in it a certain degree of flexibility, like that which is felt on compreſſing a bladder not quite full of water: If the Rupture be formed of the caul, on the touch we perceive a ſoftneſs, like that we feel in handling a piece of tripe. If the Rupture conſiſts of both theſe parts, the ſigns are then mixt; we feel in handling the tumor, that flexibility, and at the ſame time, that ſoftneſs juſt now mentioned.

PROGNOSTIC SIGNS. We may affirm of the Ruptures of the groin, that the incompleat are more dangerous than the compleat, and alſo of more eaſy cure; for in the compleat, the diſarrangement of the part is more conſiderable; but the hole of the ring being larger, they are leſs ſubject to ſtrangulation.

CURE. The Ruptures of the groin are ſuſceptible of three different methods of cure; of which I ſhall ſpeak hereafter, *viz.* the palliative, the radical, and of that which conſiſts in removing their ſymptoms.

CHAP. VII.

Of the crural Rupture.

EXPLANATION OF THE PART. IN the bending of the thigh, juſt in the middle, under the ſkin and the fat, there is an opening to one ſide of the ring; this

this opening, which is called the crural arch, has in effect nearly the figure of a ſmall arch. It ſerves to give paſſage out of the belly to the veſſels which carry the blood for the nouriſhment of the thigh, the leg, and the foot, and to thoſe which reconvey it from theſe parts. Theſe veſſels are called crural, and the Rupture made by this hole is alſo called crural

This Species of Rupture happens more commonly to women who have had children than to others.

DIFFERENCES. The crural Ruptures differ only in bulk or ſize: the biggeſt exceed not a hen's egg, but ordinarily they are much leſs.

CAUSES. The increaſe of the volume or bulk of the womb, in proportion as the woman advances in her pregnancy, is the particular cauſe of that ſpecies of Rupture, the guts being then obliged to bear in greater quantity on the ſides of the belly: and as in this caſe, the muſcles are ſtretched much, and their openings, called arcades, are more patent, the guts or the caul eſcape more eaſily at theſe openings, in the great ſtrainings of women with child in the act of coughing, at ſtool, or in labour.

SYMPTOMS. They are very ſubject to adheſions on account of the continual rubbings or colliſions they undergo in the motion of the thigh. The bandages being ill-made, contribute thereto much: They are alſo ſubject to ſtrangulation.

DIAGNOSTIC SIGNS. The diagnoſtic ſigns of this ſpecies of Rupture are the ſame with thoſe of the incompleat Rupture of the groin: The ſituation beſpeaks its ſpecies, with reſpect to the place it occupies,

PROGNOSTIC SIGNS. The crural Rupture is very dangerous, from the difficulty there is of reducing it into the belly; in caſe of a ſtrangulation, the operation is much more dangerous. The radical cure of it is very difficult to compaſs; nay it is not an eaſy matter to keep it in with bandages; unleſs they are made

made with much care and judgment; ſo that I may may affirm in general, that this ſpecies of Rupture is very dangerous.

CHAP. VIII.

Of the ventral Rupture.

WHAT THE BELLY IS. THE belly conſiſts of ſoft parts, which are the ſkin, the fat, and the muſcles. By muſcles we underſtand thoſe parts of animals, which are known by the name of fleſh, which conſiſts of red fibres or ſtrings, which eaſily ſeparate, when the meat or fleſh is boiled. Theſe ſtrings are joined to each other by other ſmaller ſtrings of another ſpecies, and which are ſo fine and delicate, that the ſight ſcarce diſcerns them. It is eaſy to conceive that theſe fleſhy ſtrings may divide and ſeparate from each other, by the ſtrainings we may happen to exert, and that the opening, which this diviſion forms, may give paſſage out of the belly to the guts and caul with as much eaſe as the natural holes, of which we have already ſpoken. Theſe ſorts of Ruptures, which may be thus formed, in all the extent of the belly, are called ventral Ruptures.

DIFFERENCES. The different places of the belly, where theſe Ruptures happen, characterize their difference; for ſome of them may happen about the navel; others below; others again on the ſides of the belly. In fine, they may happen in all the parts of its ſurface, and they ever are Ruptures of the belly, otherwiſe called ventral Ruptures. All of them may be produced by the gut or caul, or by both together.

CAUSES

Causes. The great extenſions the muſcles are expoſed to in pregnancy, and in the dropſy, are the proximate and moſt common cauſes of theſe ſpecies of Ruptures: yet violent ſtrainings may give occaſion to them.

Symptoms. Of all the ſpecies of Ruptures there is none that fatigues and ſpends the patients more; becauſe in theſe caſes there is an extreme relaxation in all the parts of the belly. The continual twitchings the patients are expoſed to, incapacitate them almoſt to walk, they are ever complaining of weakneſſes and ſinkings, eſpecially after meals, which allow them no other poſture but that of ſitting or lying down. Theſe Ruptures alſo are ſubject to ſtrangulation and adheſions.

Diagnostic signs. The ventral Ruptures are known by their ſoftneſs, their elaſticity, and the facility with which they come out of the belly, and are again returned, eſpecially at their beginning.

Prognostic signs. Theſe ſpecies of Ruptures are incurable. They are not ſo ſubject to ſtrangulation as the other Ruptures, but ſhould it happen upon them, it is highly difficult to remedy; theſe ſorts of Ruptures are then very dangerous.

Cure. The palliative cure is the only one that ſuits here, ſuch is the application of truſſes; but no bandages are of more difficult execution than thoſe for ſuch Ruptures: And I may without preſumption affirm, that no one, beſides myſelf, has hitherto found out the commodious, and ſure means of keeping in theſe ruptures ſo as to prevent their coming out in what ſituation or poſition ſoever the patients are put.

CHAP. IX.

Of the means of remedying the ſtrangulation.

WHAT STRANGULATION IS. THE ſtrangulation, as was ſaid in chap. iv. is ſo conſiderable a ſtraitning of the gut, formed by the conſtriction of the parts thro' which it comes out of the belly, that its return is not poſſible. In this caſe we ſee, that it muſt be expoſed to all the ſymptoms, of which I have given a detail in the ſame chapter, and of what importance it is to remedy it ſpeedily,

THREE MEANS TO BE USED. The ſtrangulation is remedied by three means. The firſt conſiſts in the ſituation, in which the patient ſhould remain. The ſecond, in the uſe of proper remedies. The third, in replacing the gut,

FIRST MEANS. In the ſtrangulation of any ſpecies of Rupture whatever, we muſt procure to the parts, which are too much extended, a ſuitable relaxation, to leſſen the ſtraitning of the gut. The patient then ſhould be laid upon his back, the buttocks and breaſt be raiſed by means of pillows; by this ſituation the exterior parts of the belly are leſs extended, and the ruptured guts are made to have a greater tendency to return.

SECOND MEANS. The patient being in this ſituation, the ſuitable remedies muſt be forthwith uſed, and thoſe proper to promote the reduction of the parts. Each country, each practitioner, has his peculiar remedies; but as ſome of them are approved by all the people of the profeſſion, and every-where to be met with; 'tis on ſuch I ſhall inſiſt, to the end that the inſtructed patients may uſe them directly,

and

and till they can have recourſe to the aid of their ſurgeon, The coldeſt and the hardeſt water, as that of a pump, thrown immediately upon the Rupture, is the moſt efficacious remedy, and which ought to be uſed the firſt, if one is ſo happy as to apply it in the firſt moments of the diſeaſe; if the patient be laid on a bed, and we apprehenſive of wetting it, it will be ſufficient to dip rags in this water, and applying them on the affected part, ſhift them every minute; to this water may be added half the quantity of vinegar. It is to be obſerved, that this remedy, whlch is the moſt ſovereign of all thoſe we are going to preſcribe, would prove highly dangerous, if not uſed, at leaſt, at the very firſt; becauſe after that, it diſpoſes the guts to a gangrene; but being properly applied, it promotes the return of the gut with as much eaſe as the moſt dextrous hand, and the moſt accuſtomed to this operation.

If theſe remedies have not been applied, for want of being able to ſeize on the critical moment, the patient muſt be blooded directly, and that till he faints away, and the ſurgeon to improve the moment of the ſwooning, (during which all the parts are in a ſtate of relaxation) to procure the return of the Rupture.

But it may happen that this means has not ſucceeded, either thro' the diſpoſition of the patient, or the little experience of the ſurgeon; in that caſe we muſt apply on the Rupture the remedies capable of relaxing the ſtrangling parts. Nothing is more fitted to produce this effect than the crum of bread boiled in water or milk; we may add to it oil. This poultice is wrapped up in a ſmall bag of fine cloth: But we here ſtill more uſefully employ warm milk put into a hog's bladder, and applied on the ailing part, or an omelet made with oil; that of nuts is the beſt. Theſe applications ſhould be ſhifted every three hours, and during the uſe of them, the patient to be let the ſame

quantity

quantity of blood every two hours alſo, taking at each time 5 or 6 ounces.

Whilſt we thus labour to procure the relaxation of the parts which ſtrangle the gut, we muſt endeavour to void the matters which may be evacuated from the guts, by means of ſmall gliſters of river water, in which has been boiled wheat-bran, and into which is put a large-ſpoonful of ſugar or common ſalt: by thus voiding the guts, we alſo procure a relaxation to the exterior parts, by bathing and moiſtening them.

If theſe remedies prove ineffectual for two days, people ought not to heſitate a moment to procure the aid of ſome able ſurgeon, who is to act in conſequence of the violence of the ſymptoms; (for then they heighten more and more) whilſt nurſe waits for his aſſiſtance ſhe muſt apply a poultice made of crum of bread boiled in red wine.

In all caſes, wherein crum of bread is uſed, it muſt be crumbled very fine and ſmooth.

Regimen. During the courſe of the diſeaſe, the patients muſt have no nouriſhment, becauſe they throw up all they take, and what is given them is quite loſt upon them; beſides, the feeding them excites the vomiting, which comes on but too often.

Third means. The replacing the parts, which is called reduction, is an operation of the hand, which conſiſts in procuring the return, into the belly, of the gut or caul, which were come out.

It is very difficult to give rules on the manner of performing this operation; beſides, it only concerns the people of the art to be inſtructed therein, and ſo I forbear ſpeaking of it: Such as are curious of knowing the general rules, which may be given on it, may conſult my book, Chap. XIII. Sect II. Part 1. It is enough for the patients to know that they ought not to quit their bed, after the reduction of the parts, before they are guarded with a machine called a truſs,

to

to stop up the hole, thro' which the guts or caul were come out, and prevent this accident from happening again. As life depends on such sort of machines, and that the patients are incapable of judging of their defects, I am in the following chapter to give the exactest rules possible to judge of their good or ill constructions, and thereby enable the patients themselves to determine about the advantages which may result from trusses well or ill made.

CHAP. X.

Of the Trusses proper for the different species of Ruptures.

WHAT A TRUSS IS. TRUSSES are solid bands made in form of a circle, applied round the body, to oppose the issuing forth of the Ruptures.

THE MATTER OF TRUSSES. The matter of which trusses are made, is a composition of iron and steel forged together so as to acquire a solid consistence, elastic and incapable of warping: This last matter should only make a third, a half, or two thirds of the truss, the rest to be of leather, the whole lined with cloth proper to guard against the hardness of the iron-work.

THE PARTS OF THE TRUSS. It is necessary to know the parts of the truss before we learn to make the proper application of it, or determine its position: Three principal parts are to be observed in the iron-work of the truss; the plate, the circle, and the tail. The plate is the anterior extremity, destined to fasten a cushion, which ought to stop up the hole of the belly; on the outside of this plate is a hook for fastening the girdle of leather: The circle is the part extending from the plate as far as to the tail; the tail is the poste-

terior extremity of the iron-work, to which is faſtened the girdle of leather. The plate or the cuſhion is alſo called the point of compreſſion; the tail, the point of ſupport.

THE CONDITIONS OF THE TRUSS. The iron-work ſhould be adjuſted in ſuch a manner as to apply or fit exactly quite round the body, as otherwiſe it would be apt to bear falſe, or warp, gall the patient, and never cloſe up the hole exactly, the Rupture be apt to fall out, the plate of the truſs be galling, and give occaſion to the adheſion, an untoward ſymptom, of which we have ſpoke in chap. iv.

TRUSS OF STEEL. The truſs of ſteel is the only one which may be applied round the body, without being ſubject to any variation or warping, its turn or rounding being well moulded to the ſhape of the body for which it is made, renders it firm, invariable and incapable of ſhifting place, in what ſituation ſoever the patients put themſelves.

SPRING-TRUSS. Some workmen have imagined they gave a great degree of perfection to the truſs by adding to the cuſhion a ſpring to make it bear downwards, without conſidering that if the compreſſion be greater in the lower part, it is leſs in the upper, where the Rupture takes a new courſe, and now and then comes out.

JOINT-TRUSSES. Others have deviſed a joint-truſs, the uſe of which is pernicious; for the truſs, which ſhould remain firm upon the body in the different motions of the patients, cannot poſſibly do ſo, its joints ſuffering it to open and cloſe according to the motions of the patients.

ELASTIC TRUSSES. Many more advantages were imagined to be found in certain truſſes, to which they have given the name of *Elaſtic truſſes of a new invention*; this elaſtic virtue which conſtitutes their merit is very advantageous when this ſort of truſs is executed by an intelligent hand, who knows how to give

the degree of turn or rounding proportioned to the ſhape of the body, on which it is to be applied, a thing extremely difficult; for otherwiſe it ever bears falſe, galls the patients, and neither reſtrains the Rupture.

TRUSS WITHOUT STEEL. The truſs without ſteel has all the moſt dangerous inconveniencies poſſible; and I cannot too much caution patients againſt a machine, which may eaſily miſlead, from the notion of reſtraint and pain at firſt excited in the mind by the idea of ſteel, which enters into the compoſition of other truſſes; but if they conſider that the cuſhion of the truſs without ſteel has no fixed point to render it immoveable, they ſhall come eaſily to underſtand that it cannot effect an exact compreſſion on the hole of the Rupture; but when the patient is in bed, and that in that caſe moſt patients being able to do without a truſs, this ſort becomes uſeleſs, and proves dangerous in all other ſituations, as it prevents not the exit of the Rupture.

Therefore I conclude, from what I have juſt ſaid on the ſubject of truſſes, that thoſe agreeing the beſt are the ſteel-truſſes methodically made, that is, made according to the nature and ſpecies of the malady, and turned or rounded to the ſhape and ſtructure of the bodies of the perſons on which they are to be applied. But as it ſufficeth not that patients have truſſes properly conſtructed for them, but further neceſſary, they know how to uſe them to advantage, I ſhall in the following chapter relate the inconveniencies which may happen upon the uſe of theſe machines.

CHAP. X.

Of the inconveniencies which may happen during the uſe of Truſſes.

THREE GENERAL INCONVENIENCIES MAY make patients, but little attentive to their ailments, loſe all the benefit they ſhould otherwiſe derive from the uſe of truſſes executed according to the rules of art. Some ariſe on the part of the diſeaſe itſelf; others, of the patients; others again, of the truſſes.

INCONVENIENCIES CHARGEABLE TO THE SCORE OF THE DISEASE. Ruptures of the caul are very difficult to keep in the belly, becauſe that part being a fatty membrane, is very ſlippery. How little ſoever we neglect the retaining them in the belly, they are ever encreaſing; patients ſhould in that caſe then ſubmit to wear their truſſes night and day, and tighter than in a Rupture of the gut.

Sometimes the Rupture is found to conſiſt of the gut and caul together, and it may happen that in this caſe the gut enters into, and the caul remains out of the belly without being able to return on account of ſome adheſions which reſtrain it; the patients ought not therefore to go without the truſs, as, except in ſome particular caſes, it is neceſſary to prevent the coming forth of the gut. Art then directs to make a truſs that ſhall cloſe the hole ſo as to hinder the gut from coming out, yet not over-compreſs the caul, for fear of cauſing ſome alteration therein.

INCONVENIENCIES TO BE LAID TO THE ACCOUNT OF THE PATIENTS. The two extremes of being too thin or too fat are inconveniencies on the part of the patients, which oppoſe the ſtability of the truſs,

and

and make the uſe of it always difficult, unleſs the ſurgeon and the patient, each on their part, give all the attention neceſſary.

In an extreme leanneſs, the bones being bare and uncovered, but by the ſkin, and theſe bones themſelves forming eminencies and pits, the ſurgeon the moſt verſed in making of truſſes, muſt miſcarry, if he employ not all the attention neceſſary to give them the ſhape proportioned to that of the bones; but the patients, on their part, ought to apply all their care to keep them in place, as we ſhall ſee in chap. XIII.

In an extreme of corpulency, the too great quantity of fat gives the hips a difformity ſo contrary to the natural ſtate, that the turn of the truſs ſhould alſo be very different from what is aſſigned it in a moderate corpulency. And it is very difficult for the truſs to be capable of producing the effect expected from it, if the patient himſelf favour not the intentions, and be not careful to tighten it from time to time.

THE INCONVENIENCIES TO BE MET WITH on the part of the patients, in Ruptures of the navel, equally ariſe from the difformity of the belly, which is more or leſs prominent, more or leſs thin, tight or ſoft, according to the greater or leſs degree of relaxation undergone by the ſkin, the fat and the muſcles in the ſtate of pregnancy, and of conſequence the truſſes for theſe ſorts of Ruptures ſhould be as differently conſtructed as the ſhapes of bellies differ; for if the belly terminate in a point towards the navel, the point of compreſſion eaſily varies; if the navel be found lower than the hips, the point of ſupport or bearing is very difficult to find; if the belly be more raiſed above the navel than below it, the truſs tends to fall down below the Rupture: All theſe differences call for different degrees of attention in the make of the truſſes, none of which, in this caſe, are capable of

remaining in place, unleſs that ſort of my invention, of which I ſhall ſpeak at the cloſe of this chapter.

The more the truſs is apt to vary or ſhift, the greater degree of conſtancy the patient ſhould put on, to give it the time to fix or ſettle, and the ſurgeon, on his part, endeavour to mould and fit it to the body of the patient by degrees. In perſons extremely thin, we muſt not at firſt tighten it to the higheſt pitch, the uſe of it would then prove diſcouraging and inſupportable. The parts, that ſerve for ſeat to it muſt inſenſibly be made accuſtomed to its impreſſions. In perſons extremely fat, the ſame precautions muſt be uſed, becauſe the fat can ſubſide but by little and little under the truſs; and ſo it muſt be tightened but in proportion as it ſinks in the thickneſs of the fat, without which it would become too wide; theſe degrees of attention ſhould then be divided between the patient and the ſurgeon, till the truſs has acquired a firm and invariable ſituation. The patients ought not to put off their truſs night and day, till they are become accuſtomed to it. When the Ruptures have a great facility of coming out, as thoſe conſiſting of the caul have, every motion muſt be avoided capable of determining the parts to come out, as violent ſtriding, raiſing the arms too high, and ſtrong ſneezing: Finally, if the belly be bound, the patient is obliged to ſtrain much at ſtool, and then it is proper to procure an open belly, by means of glyſters, or making him ſwallow a little purging electuary; if notwithſtanding this, he be obliged to ſtrain in the leaſt at ſtool, let him reſt his hand on the upper part of the plate of his truſs, to prevent its aſcending; and this he is to do every time he ſneezes or coughs or blows his noſe; becauſe in theſe great motions the cuſhion of the truſs is always determined or apt to aſcend, and then the hole it ſhould ſtop is found a little uncovered: By all theſe attentions the parts will be gradually accuſtomed to remain in the belly and ac-

quire

quire the habitude of not coming out, and the patients being in bed, in that caſe, they may pull off their truſs at night.

INCONVENIENCIES ON THE PART OF THE TRUSS. We have juſt ſaid that truſſes can only gradually mould themſelves to the bodies of the patients; they are therefore of themſelves ſubject to ſome variation, which muſt neceſſarily be remedied, to procure them the utmoſt degree of perfection; this perfection conſiſts, as I have already ſaid, in the juſt turn or rounding, and exactly proportioned to the parts on which the truſs is to be applied; for if it bears falſe, I mean, if it bears on one part more than on another of the circumference of the belly, it cannot fail to gall, and the point of compreſſion be vicious and irregular; beſides, this defect makes it ſubject to break in the part where is the void or hollow; this defect is not always perceivable at the very firſt time it is applied on, becauſe the covering, which is new and ſtriking conceals its hollows, but after being wore for ſome days, the covering flattens; the fat, which is under the girdle, ſubſides; the leather, which forms the reſt of the circle, lenghthens, and the truſs no longer compreſſes in any part of the circumference of the hips, unleſs in the part which bears falſe. This inconvenience, which is conſiderable, is eaſily amended, when patients come to be well acquainted with the manner of ordering theſe machines: But a defect common to all the truſſes made for the Ruptures of the groin, and thoſe of the bendings of the thighs, and for which no one before myſelf was ever able to find a remedy, is that they bear leſs on the opening, which they ought to ſtop, when one happens to ſet very low, becauſe then the belly ſinks; this defect ſtands corrected in the truſſes of my manner, to ſo conſiderable a degree of perfection, that the patients are always ſurprized at not finding that inconvenience, after having uſed the common truſſes. And

therefore it was found neceſſary to order the patients to ſet always high; but that is not poſſible to be done every where, unleſs one was always to have his ſeat carried about with him, a thing highly inconvenient in a thouſand inſtances; this defect is likewiſe to be met with on many other occaſions, as in perſons very thin, when in bed; the cuſhion of the common truſs never bears on the hole in fat perſons, in thoſe of a reaſonable good plight of body, in like manner as in the thin; the ſame thing is alſo to be found, when they ſneeze, blow their noſe, cough, or are at ſtool, and all the means propoſed to remedy this inconveniency, are as embarraſſing as uſeleſs, and in no manner come up to the ſimplicity of my truſs, in which there is found none of theſe inconveniencies. Here is the proper place to mention a diſcovery, which my application to be of ſervice to perſons of the ſex, put me upon, in reflecting on the lot of many women, whoſe delicacy of conſtitution incapacitates them to go their full time with child.

The moſt common cauſe of miſcarriages is the ſame with that of Ruptures, it ariſes from the relaxation of all parts of the belly, both internal and external, and takes riſe in the too great quantity of ſeroſities, which water the ligaments, which ought to keep in place each of the parts contained in the belly. Now the ligaments of the womb are ſo often relaxed by the ſeroſities abounding in the blood, that that part remaining unſupported, on account of the weakneſs of its ligaments, it is impoſſible the child ſhould come to its full time, becauſe it determines by its weight the womb to remain in the loweſt parts of the belly; and not finding there ſufficient room to grow, dies thro' the conſtraint it undergoes.

The means I have found to remedy theſe troubleſome diſorders are as ſimple as the following reaſoning, which I uſe to prove its efficacy. The ligaments of the womb, and the muſcles of the lower belly being too much relaxed, the growth of the child is prevented, becauſe the womb tends too much towards the loweſt part of the belly, where it is ſtraitened for room, the muſcles of the belly not being ſtrong enough to ſupport it forwards: If by the means of a truſs ſufficient to balance the relaxation of theſe parts, that defect may be ſupplied, it is not to be doubted but that women ſubject to miſcarriages will happily go their full time: The experience of upwards a hundred women, to whom I have given this relief, proves it; having often miſcarried, before the uſe of my truſs.

It is made of a flexible matter without any iron-work at all, but ſtrong enough to reſiſt the weight of the belly. It ſtretches in proportion to the growth of the child; nothing is more eaſy to apply and to wear; it puts pregnant women, the moſt ſubject to miſcarriages, in a condition to walk and go by any carriages; and it becomes ſo commodious to them, by giving a degree of firmneſs to the whole body, that many women uſe it out of the time of their pregnancy. But it proves, beſides, highly uſeful to women, whoſe belly, being very heavy and pendulous, hinders them to walk, and to perſons to whom it is not poſſible to apply the common truſſes of the navel.

CHAP.

CHAP. XII.

A method for taking the meaſures of Truſſes, neceſſary for perſons afflicted with Ruptures.

MEASURES TAKEN. PERSONS, who would incline to procure truſſes for themſelves, not always living near great towns, where they are commonly made, have need of inſtructions to enable them to ſend their exact meaſure; I imagine it to be uſeful for ſuch, to put them on the eaſy method of taking exactly the dimenſions of their own bodies, and to inſiſt more particularly on ſome circumſtances they ought to obſerve in relation to the different ſpecies of Ruptures.

FIRST, The patient ſhould give a particular detail, in an inſtructive memorial of his conſtitution and age; whether he or ſhe are married or not; the date of the Rupture; and whether the place he lives in be moiſt and marſhy, or dry.

SECONDLY, He ſhould, as much as may be, recollect the cauſe, which has determined or occaſioned the Rupture, whether a blow, a fall, a fit of coughing, a ſudden effort or ſtraining, or child-bearing.

THIRDLY, He muſt determine nearly the ſize of the Rupture, and on what ſide it lies.

FOURTHLY, He muſt ſet down preciſely its place, if in the groin or bending of the thigh.

FIFTHLY, Whether or no it re-enters, and whether, in re-entring, it returns more difficultly in a ſtanding than lying poſture.

SIXTHLY, When the Rupture is in the bending of the groin, it is neceſſary to diſtinguiſh whether it deſcends as low as the ſide of the natural parts.

SEVENTH-

SEVENTHLY, If it is in the bending of the thigh, it is neceſſary to ſpecify, whether it be round or long.

EIGHTHLY, If there are two Ruptures, it is neceſſary to hint which is the biggeſt.

NINTHLY, It muſt be remarked, whether the perſon be fat or thin, or only in a tolerable good plight of body.

TENTHLY, It muſt be hinted, whether the patitient has one hip bigger than the other, which is a very common caſe; or if there be any other deformity, it is neceſſary not to fail deſcribing it, and ſetting down its place with ink upon the meaſure.

To this memorial the patient may add the meaſure of his body, taken with a ſlip of paper of a proper length. Whether the Rupture be ſingle or double, in the groin, or bending of the thigh, it is ſufficient to lay the middle of the ſlip of paper immediately over the part where the clift of the breech ends, and to join the two ends of the paper above the place where the top of the natural parts re-unite.

If the Rupture be in the navel, in the ſame manner will be taken the ſize of the belly, by laying the middle of the ſlip of paper on the part of the back which anſwers to thoſe of the ſides, which are between the ribs, and bones of the hips, and by joining the two ends of the paper over-againſt the part where the middle of the paper has been laid behind the back; if the Rupture be preciſely at the meeting of the two ends of the ſlip of paper, that muſt needs be ſpecified in the memorial; if not, it is neceſſary to mark exactly at what diſtance from this meeting of the two ends of the ſlip the Rupture lies, whether a quarter of an inch, half an inch, or one or two inches above or below.

Care alſo may be taken to ſpecify in the memorial, 1*mo*. The part of the navel the Rupture occupies, either the middle or its circumference, either lies above or below it, or to one ſide. 2*do*, If it is of an old or recent ſtanding. 3*tio*, Its ſize. 4*to*, Its ſhape. 5*to*,

If

If it re-enters or not. 6*to*, If the navel be higher or lower than the bone of the hips. 7*mo*, If the belly be hard or very ſoft; 'tis moreover neceſſary to know, if the patient is a woman, whether ſhe has had children, and how many.

All thoſe particulars are very neceſſary to be mentioned, in order to execute with care the truſſes proper in each of theſe circumſtances, and render them as commodious as uſeful, when the patients on their part ſhall uſe the neceſſary care in their juſt application: On this head I am to preſcribe ſome rules in the following chapter.

CHAP. XIII.

On the manner of putting on the truſſes; neceſſary precautions to be obſerved, previous to the laying or adjuſting them.

MANNER OF PUTTING ON TRUSSES. THE truſs would become abſolutely unſerviceable, if improperly adjuſted. It is, therefore, of importance to the patients, to have rules to follow for their juſt application. Theſe rules are the ſame for perſons of what age ſoever, even for children at the breaſt.

The uſe of the truſs is to ſtop the hole, at which the Rupture comes out, in order to prevent its coming out; we muſt for that purpoſe begin with reducing it back into the belly.

The Ruptures, unaccompanied with ſymptoms, re-enter with facility enough of themſelves, when the patients are in bed; of conſequence, the morning, at the hour of waking, is the time to apply the truſs.

To

To do it with eaſe, of what nature ſoever, or in what part ſoever the Rupture be, the patient paſſes the girdle below the back, and approaches with one hand the cuſhion of the truſs over-againſt the part of the Rupture; with the other he examines whether any thing remains out of the belly; afterwards, laying hold with this laſt hand on the girdle of the truſs, he pulls it to himſelf towards the cuſhion, whilſt with the other he fixes the cuſhion directly upon the part where the Rupture appeared before reduction: He at the ſame time faſtens the girdle to the hook, which is on the outſide of the cuſhion.

To procure the proper poſition to the truſs, the lower border of the girdle ſhould be behind the back, immediately above the clift of the breech. When the patient is ſure it has gained its due poſition, he muſt then tighten it ſufficiently: For this purpoſe he lays hold on the girdle with one hand, at the part where it joins to the iron-work of the truſs, and pulls it ſucceſſively by ſlipping the hand as far as to its extremity; while with the other hand he holds the cuſhion ſteady on the part where it ſhould be placed; if it were not ſupported, it would ſhift to one ſide of the thigh, and no longer be found on the hole of the Rupture. It is not neceſſary that the truſs be too ſlack, and neither muſt it be too tight. You will obſerve to tighten it from time to time; fat people ſhould particularly mind this, becauſe the longer they uſe the truſs, the fat ſinks under the girdle, which of conſequence becomes too ſlack; which is the reaſon that the over ſlackening of the girdle is charged on its lengthening: And it alſo happens that the girdle of the truſs is found hid by the pads which the fat forms both above and below, when the fat has been entirely flattened under the girdle by its reiterated compreſſions.

Almoſt all the patients have the cuſtom of placing the cuſhion of their truſs too low, eſpecially ſuch whoſe

whoſe Ruptures fall down pretty low, without conſidering, that the buſineſs is only to ſtop the hole, to prevent the parts from coming out; for when the cuſhion is placed ſo low, the hole remaining unſtopped, the Rupture comes out above the cuſhion of the truſs.

When the patients are thin, the truſs fails not to aſcend, eſpecially when they are in bed: In this caſe, they muſt uſe a ſmall ſtrap, which is fixed to the truſs; they paſs it under the thigh, and faſten it to the iron-hook, which ſerves to fix the girdle; but they muſt obſerve that it ought to be put under the leather of the girdle, as otherwiſe it would be always apt to looſen.

When there is a neceſſity of wearing the truſs of nights, patients muſt take care to adjuſt or put it in order before they get out of bed of a morning, and as the motions they give themſelves lower or raiſe it behind, they muſt not fail replacing it in its due poſition, as otherwiſe the cuſhion would not bear exactly upon the hole.

With reſpect to children who are not cleanly, we muſt be careful of ſhifting their truſſes every day, to prevent the ordure from heating or fretting them.

In plump fat children, the girdle ſhould behind be a good finger's breadth above the clift of the breech; in the thin, it ſhould immediately touch the clift, or even be a little lower.

We muſt be ever cautious in ſhifting their truſs, that the Rupture does not fall out again; for this purpoſe, we muſt have ready at hand that which is to replace the other, and lay the finger on the hole, till the ſecond finger is adjuſted.

CHAP.

CHAP. XIV.

Of the radical cure of Ruptures.

RADICAL CURE. BY radical cure we mean ſuch as removes a diſeaſe to its very root. The radical cure of Ruptures is, therefore, that, by means of which we may cure theſe diſorders, without apprehenſion of any return. Is this poſſible? 'Tis what may be eaſily proved.

But as I ſhould be obliged to tranſcribe word for word what I have at large to ſo good purpoſe writ on this ſubject, ſuch as would ſatisfy themſelves of this truth may conſult my book, chap. xiv. ſect. ii. part i.

All I can ſay to prevail on the patients not to ſuffer themſelves to be diſcouraged, as commonly thoſe are, who are afflicted with theſe diſorders, is, that there are none for which there is a greater variety of remedies known. The only queſtion is to know how to appropriate them to the conſtitutions of the patients, their age, their ſex, the climates they inhabit, and to know how to diſtinguiſh the ſpecies of Ruptures which are curable from thoſe which are incurable. 'Tis with theſe infirmities as with all the others; ſuch a one cannot be cured by a remedy, which ten or a ſcore others have found the good effects of, becauſe the circumſtances differ. This is the reaſon, why the remedies of the good women do ſometimes much good, and very often a great deal of harm.

F I N I S.